

Chapter 6

Quality Assurance Testing and Specifications

6-1. General

All waterstops and other preformed joint materials will be tested for compliance with the applicable specifications prior to their use. Any material failing to comply with their respective specification requirements will be rejected as a manufacturing lot or run, acceptance and rejection will only be based upon a full evaluation.

6-2. Testing

Samples of all waterstops will be sent to the testing laboratories as described in Section 5-6.

a. Metallic waterstops. All metallic waterstops will be tested and evaluated for chemical composition and relevant mechanical properties such as tensile strength, elongation, hardness, and bending.

b. Nonmetallic waterstops. Nonmetallic waterstops will be tested and evaluated as called for in CRD-C 513 or CRD-C 572 as appropriate.

c. Preformed compression seals. Preformed polychloroprene elastomeric joint seals will be tested and evaluated as called for in CRD-C 531.

d. Gaskets and other sealing materials. Gaskets and other sealing materials shall be tested and evaluated as called for in the applicable specifications.

e. Lubricants. Lubricants for installing preformed compression seals will be tested and evaluated as called for in CRD-C 532.

6-3. Specifications

a. Metallic waterstops. Copper waterstops are covered by Standard Specification for Copper Sheet, Strip, Plate, and Rolled Bar, CRD-C 546 (USAEWES 1949) (ASTM B 152) and Standard Specification for Copper Sheet and Strip for Building Construction, ASTM B 370.

Stainless steel waterstops are covered by Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip, ASTM A 167. Steel waterstops are covered by Standard Specification for Steel, Strip, Carbon, Cold-Rolled, ASTM A 109, or Standard Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled, Structural Quality, ASTM A 570. Lead waterstops are covered by Standard Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products, ASTM B 749. Bronze waterstops depending upon the alloys in the bronze material are covered by Standard Specifications for Aluminum Bronze Rod, Bar, and Shapes, ASTM B 150, Standard Specification for Aluminum Bronze Plate, Sheet, Strip, and Rolled Bar, ASTM B 169, Standard Specification for Phosphor Bronze Plate, Sheet, Strip, and Rolled Bar, ASTM B 103, or Standard Specification for Manganese Bronze Rod, Bar, and Shapes, ASTM B 138.

b. Nonmetallic waterstops. Rubber waterstops (butyl, neoprene, styrene butadiene, nitrile butadiene, polyisoprene, and natural) are covered by U.S. Army Corps of Engineers Specifications for Rubber Waterstops, CRD-C 513. Polyvinyl chloride waterstops are covered by Corps of Engineers Specifications for Polyvinyl chloride Waterstops, CRD-C 572. Factory and job-site made splices are covered by CRD-C 513 and CRD-C 572.

c. Preformed joint materials. Preformed compression seals for concrete pavements are covered by Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements, CRD-C 531 (ASTM D 2628) and Standard Specification for Jet-Fuel- and Heat-Resistant Preformed Polychloroprene Elastomeric Joint Seals for Rigid Pavements, CRD-C 548. Preformed compression and tension-compression seals for bridge decks are covered by Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Bridges, ASTM D 3542. Preformed gaskets and joint sealing materials are covered by Standard Specification for Cellular Elastomeric Preformed Gasket and Sealing Material, CRD-C 549 (ASTM C 509).

d. Lubricants. The lubricants used in the installation of many preformed joint materials are covered by Standard Specification for Lubricant for Installation of Preformed Compressive Seals in Concrete Pavements, CRD-C 532 (ASTM D 2835).